

Group
Group No. 1 (40 claims)
GO 101-108 incl., 86, 88, 90, 92,
94, 96, 98, 100.
Cu 37, 39, 41, 43, 45, 47
Cu 57-64 incl.
Cu 73-80 incl.
Cu 89-90 incl.

Record
Numbers:
15646H, 15648H, 15650H, 15652H, 15654H, 15656H,
15658H and 15666H.
14357R, 14359R, 14361R, 14363R, 14365R, 14347R.
14377R to 14384R incl.
14383R to 14400R incl.
14409R and 14410R

Skyline Project
Pyrrhotite Creek Area
Atlin M.D., B.C., 104-J-4

GEOLOGICAL and GEOCHEMICAL PROGRAM

July 15 - August 15, 1970

58° 131° S.W.

2805

by

V. Cukor, P.Eng.

and

P.H. Sevensma, Ph.D., P.Eng.

PETER H. SEVENSMA CONSULTANTS LTD.

September 14, 1970

Group No. 2 (40 claims)
GO 85, 87, 89, 91, 93, 95, 97, 99
Cu 38, 40, 42, 44, 46, 48
Cu 21-32 incl.
Cu 3-16 incl.

15645H, 15647H, 15649H, 15651H, 15655H, 15657H,
15659H.
14358R, 14360R, 14362R, 14364R, 14366R, 14368R.
14341R to 14352R incl.
14323R to 14336R incl.

(see over for Group No. 3)

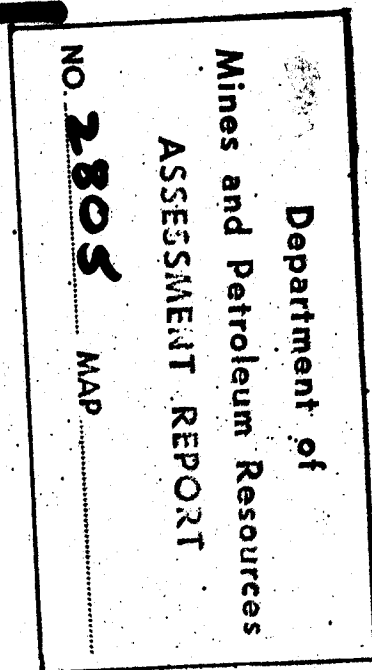


TABLE OF CONTENTS

	<u>Page No.</u>
1. INTRODUCTION	1
2. PROPERTY	2
3. LOCATION and ACCESS	2
4. GEOLOGY	3
5. GEOCHEMISTRY-SOIL SAMPLING	4
6. MINERAL SHOWINGS	7
7. SUMMARY	9
8. RECOMMENDATIONS	10

ILLUSTRATIONS

Fig. 1 - Claim map	1:50,000
Fig. 2 - Geological map	1" = 1,000'
Fig. 3 - Soil sampling - Cu plot.....	1" = 1,000'
Fig. 4 - Soil sampling - Cu plot	1" = 500'
Fig. 5 - Soil sampling - Pb plot	1" = 500'
Fig. 6 - Soil sampling - Zn plot	1" = 500'

Skyline Project
Pyrrhotite Creek Area
Atlin M.D., B.C., 104-J-4

GEOLOGICAL and GEOCHEMICAL PROGRAM

July 15 - August 15, 1970

58° 131° S.W.

1. INTRODUCTION

The Pyrrhotite Creek area is situated on the East slope of Kaketsa Mountain (fig. 1). It is a part of the Skyline property known as Go Group and covers about thirty GO and G claims.

The area had been staked before and some old claim posts were located, but no evidence of any previous work was found.

The field exploration was carried out during the summer season, 1970, starting with prospecting and geochemical soil and silt reconnaissance. After prospectors located several chalcopyrite showings and initial soil sampling showed some good Cu values, new staking was done to protect interesting ground.

The exploration work was continued with systematic soil sampling after cutting grid lines, and geological mapping on the base map at a scale of 1" = 500'. The present report summarizes these results.

2. PROPERTY

The Pyrrhotite Creek area comprises the following mineral claims:

<u>Claim</u>	<u>Taq No.</u>	<u>Record No.</u>	<u>Expiry Date</u>
G0 57 - 62	945742 - 945747	9949N - 9954N	Aug. 19, 1972
G 5 - 10	774433 - 774438		Aug. 19, 1972
G0 89 - 96	977921 - 977933		June 27, 1971
G0 103-108	977935 - 977940		June 27, 1971

3. LOCATION and ACCESS

The property is located approximately 30 air miles NW of Telegraph Creek, latitude $58^{\circ} 13' N$ and longitude $131^{\circ} 46' W$ on map sheet 104-J-4 and at an elevation from 2,500' to 5,000'.

The access is by helicopter from Telegraph Creek (accessible by road from Dease Lake or by plane), and by float plane to Kennicott Lake and by helicopter or via the old Telegraph Trail to the property. An access road from Telegraph Creek or following the Tahitan River could be built quite easily.

Timber is available on the lower elevations and snow melting on the top of Kennicott Mountain supplies water all summer.

volcanics and intrusives are highly altered with secondary K-feldspar, epidote, chlorite, magnetite, local gypsum, calcite and specularite. Very interesting is an occurrence of massive or near massive magnetite along some of the fractures in andesite along the southern part of the grid, because it is often associated with very good sulphide mineralization with a high proportion of chalcopyrite.

Contacts are very irregular, with abundant dykes and fractures with intrusive filling within the volcanics and different sizes of xenolites of volcanic rock in intrusive bodies. Post-intrusive movements have further complicated these contacts. The distribution of these formations is shown on the attached geological map.

5. GEOCHEMISTRY-SOIL SAMPLING

Geochemical soil reconnaissance by prospectors M. Cloutier and A. Giesbrecht, more or less along the contour lines at 500' spacing, showed some very good Cu values, and in the same time a number of good chalcopyrite showings were located. This preliminary exploration work was followed up by a grid construction-baseline

10,100' long and 11 crosslines 4,000' long and 800' apart. Soil samples were taken along the lines at spacing 100' and 200', dried in camp and assayed by Vancouver Geochemical Laboratories Ltd. for Cu, Pb, Zn and Mo.

Samples were taken with a mattock from the "B" horizon at depths of from 4" - 10".

4. GEOLOGY

General geology is shown on G.S.C. map 21-1962, Dease Lake sheet 104-J-4. Geological mapping conducted during 1970 was done on 1" = 500' scale and later geology was plotted on the topographical map on a scale of 1" = 1,000', blown up from the 1:50,000 map. This map is attached to the report as figure 2.

The area is underlain by volcanic and intrusive rocks covered in places by both a thick deposit of an unsorted glacial till and/or coarse talus. The volcanics consist mainly of different varieties of andesite. The most common variety is massive andesite, fine to medium grained, greenish-grey or medium to dark grey. The texture is formed by a fairly uniform anhedral to subhedral aggregate of white to medium grey feldspar and black hornblende and/or augite. In places, this rock has porphyritic characteristics with stubby feldspar phenocrysts up to 1/4" long (in the area L 8 E, 1-6 N). In a few pieces of float, feldspar phenocrysts were extremely large, up to 2" long. Toward the SW corner of the grid the volcanics are more tuffaceous, in places with clearly developed banding. This unit of volcanic rocks is probably of Triassic age, and during the Cretaceous has been intruded by monzonite-syenite bodies of irregular shape. In the particular area, most of the intrusive seems to be monzonite, fine grained, containing mostly feldspar and some black hornblende crystals with minor or no mica. Along the contact zone, both

Sample numbers and used assay reports are as follows:

<u>No. of Samples</u>	<u>Sample No.</u>	<u>Assay Report No.</u>	<u>Date of Report</u>
7	MC 9/6/70, 8 - 14	70-82-006	June 22, 1970
9	AG, 1 - 9 B	70-82-012	July 3, 1970
162	BL-P, 0-10161 E	70-82-017	July 30, 1970
	L-0, 1 N - 19 S		
	L-8 E, 1 N - 20 S		
	L-16 E, 1 N - 20 S		
81	L-24 E, 2 N - 20 S	70-82-018	Aug. 5, 1970
	L-32 E, 2 N - 20 S		
	L-48 E, 2 N - 20 N + 2 S		
	L-56 E, 2 N - 20 S		
	L-64 E, 2 N - 20 N		
60	L-40 E, 2 N - 20 S	70-82-019	Aug. 18, 1970
	L-64 E, 2 S - 20 S		
	L-72 E, 2 N - 20 N		
	L-80 E, 2 N - 20 S		
<hr/>			
319 samples			

Intention was, to take samples in "B" horizon, but in places soil was very poorly developed and some coarser grained material formed part of the samples.

In the laboratory samples were processed as follows:

1. Assaying done on the -80 mesh fraction.
2. Weight of each sample used - 0.5 g.
3. Extraction by hot HNO_3 and HClO_4 .
4. Method - Atomic absorption spectrophotometry.
5. Volume of dilution used - 10 mil.
6. Instrument - Techtron AA4 and AA5.

As explained earlier (see report: P.H. Sevensma, Geochemical Reconnaissance, May - July 1970) on the basis of experience for the area, results may be grouped as follows:

	<u>Cu p.p.m.</u>	<u>Pb p.p.m.</u>	<u>Zn p.p.m.</u>	<u>Mo p.p.m.</u>
Background	50	50	100	0 - 3
Threshold zone	51 - 100	51 - 100	100 - 300	3 - 6
Anomalous	101 - 300	101 - 300	300 - 600	6
Significantly anomalous	301 - 600	301 - 400	601 - 1200	
Major anomaly	600	400	1200	

Figures 3 and 4 show Cu values plotted on on 1" = 1,000' and 1" = 500' scales. Generally, copper content in the soil is fairly high in the whole grid area with zones of significant high values up to 2,500 p.p.m. Cu peak. Most of these zones follow an approximate N 50° W trend, the same one that was found during geological mapping. This trend was found to be a major one of prominent fracturing controlling Cu mineralization. Although some of the geochemical results are possibly misleading, because of deep overburden or poorly developed soil in certain areas, most of the locations with good Cu soil values show Cu mineralization in the rock. Another important factor in assessing the meaning of high Cu is that these values are often accompanied by anomalous molybdenum results (see fig. 4), suggesting the nearby presence of an underlying centre of mineralization.

Lead values, shown on figure 5, are in the background range for the whole explored area.

Zinc (figure 6), shows a somewhat scattered pattern. There is no explanation for the fact that the highs sometimes correspond with high copper, and sometimes not.

6. MINERAL SHOWINGS

The prospecting, in the early stage of exploration of the Pyrrhotite Creek area, and geological mapping during and after soil sampling, revealed a number of mineral showings. Low grade Cu mineralization, ranging 0.1% Cu or lower, is wide spread in the area in both intrusive and volcanic rocks. Better Cu mineralization, mostly chalcopyrite and secondary malachite and azurite, follows major fractures and shear zones trending generally NW - SE.

In the Western part of the grid (lines 0, 8 E and 16 E) there is a zone over 1,000' wide with a number of mineralized fractures trending about N 40° - 50° W. Individual showings are from 10' - 100' wide and some of these can be traced for a few hundred feet along strike. Overburden and rock slides render impossible to measure the showings properly. Mineralization occurs in both volcanic (andesite) and intrusive (monzonite) rocks as well as in syenitic dykes in volcanics. Chalcopyrite is closely associated with magnetite (in places highly oxidized into limonite) and some specularite, and the whole zone is intensively altered,

especially along fractures, with epidote, K-feldspar and chlorite, and in places with secondary biotite. Sporadically, chlorite appears as filling of fractures up to 2" - 3" wide. Toward the SE, the zone is running under thick cover of the glacial till. Sample no. 70213, Crest Laboratories Ltd., Sept. 1, 1970, taken 30' West of L 16 E, 5 S assayed 1.84% Cu and represents higher grade material from the good mineralized zone exposed for a width of about 15'.

Another interesting zone lies in the canyon of one of the West forks of Pyrrhotite Creek. Chalcopyrite and secondary Cu-oxides along the fractures in highly altered volcanics and intrusives are spread out across a length of about 2,000'. During mapping, no preferred fracture system controlling the mineralization was found in this area. The trend of the whole zone and of the accompanying Cu-geochemical soil anomaly are parallel to the trend of the above described zone.

Northwest of the canyon lies a monzonite which is moderately altered, containing low-grade disseminated sulphides enriched in places up to 1% - 2% of chalcopyrite.

Trenching and bulk sampling are necessary to evaluate properly these showings and the potential of the area.

7. SUMMARY

The area of interest West of Pyrrhotite Creek measures about 7,500' by 2,000', about $\frac{1}{3}$ of which is covered by extensive overburden.

A preliminary estimate is that about 25% of the total area carries significant copper-mineralization in place. Initial test trenching has shown that the first few feet from the surface down is well leached, and that at a depth of some 3' good mineralization in place is obtained (15' of 1.84% Cu) below the oxidized outcrops.

Alteration is widespread and of a type associated with commercial grades elsewhere in the Stikine belt, i.e. epidote, chlorite, biotite and K-feldspar. In places, the typical red syenite associated with significant mineralization elsewhere in the Stikine area, is also present.

Within the framework of the area surrounding Kaketsa Mountain, the area described in this report appears at present as having the best economical potential, with an area of some 1,000' x 2,000' having a good probability of commercial mineralization.

Trenching across the main structures to a depth of about 4' is recommended, to be followed by shallow core-drilling in angle-holes across the zones of interest, which program is likely to lead to more extensive drilling to a vertical depth of at least some 500' - 800'.

8. RECOMMENDATIONS

The following program is recommended:

A. First Stage, firm

Rock-trenching, 1,000' lineal feet, to obtain grade of fresh mineralization in place.

Linecutting: 10 miles to obtain a 400' line spacing.

Magnetic surveying: 16 line miles, as Cu is related to magnetite.

Geological mapping: 1" = 200' in the central area of interest, and detailed mapping of the trenches.

B. Second Stage (to be detailed after the first stage)

IP Survey, tentative, 10 line-miles.

Shallow drilling with a light machine, say twenty 100' - 200' long holes at -50° on a NE - SW bearing, for a total of 3,000'.

C. Third Stage, contingent


This stage depends upon the results of the shallow drilling and may involve an extensive program of 500' - 1,000' long holes.

No cost-estimate is prepared at this time, as this program will be part of a larger program on the various groups explored under the Skyline Project in the Kaketsa Mountain area.

Respectfully submitted,

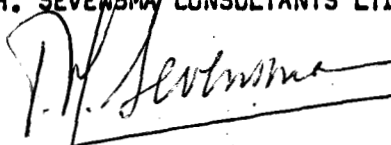


V. Cukor, P.Eng.

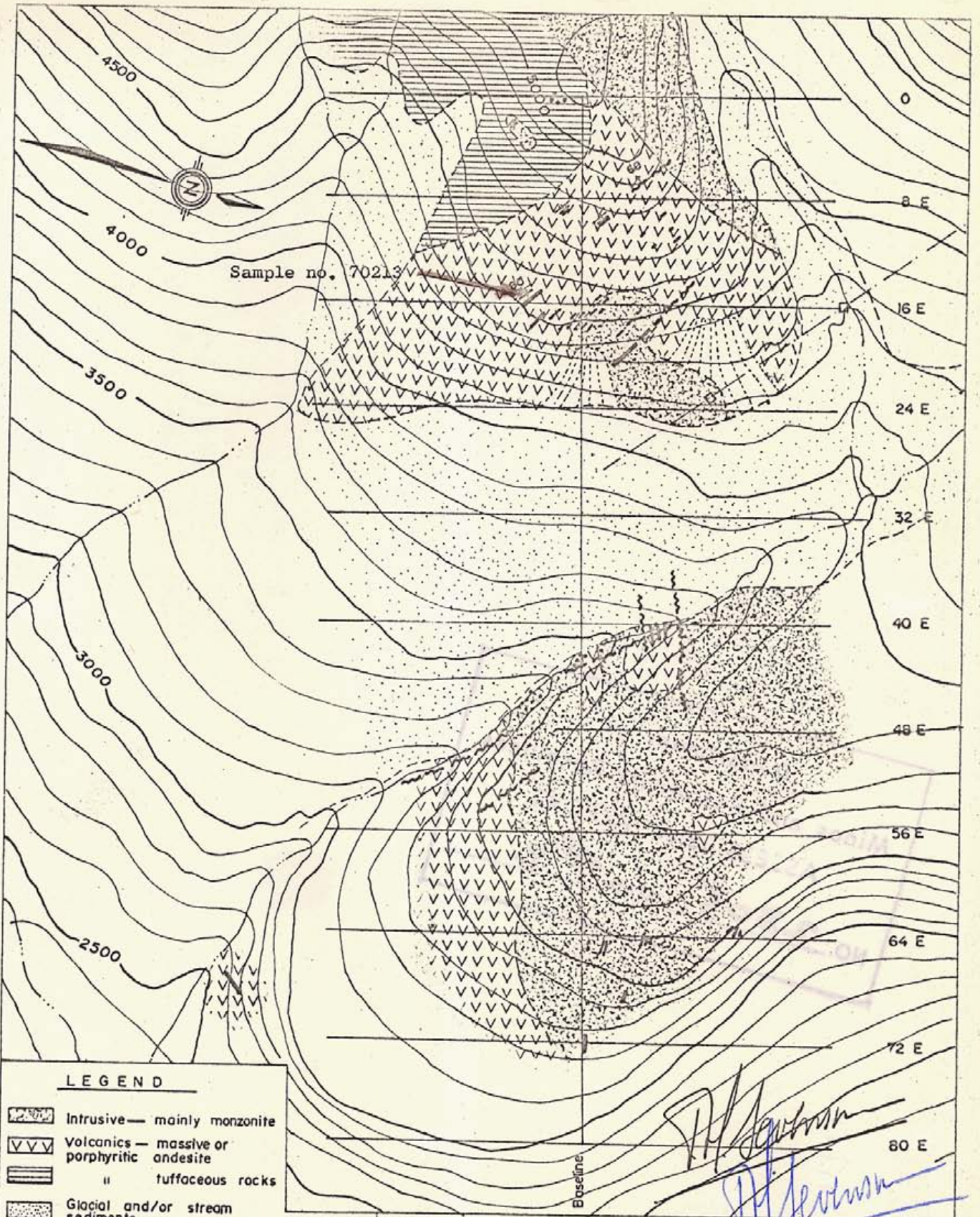


P.H. Sevensma, Ph.D., P.Eng.
PETER H. SEVENSMA CONSULTANTS LTD.

Vancouver, B.C.
September 14, 1970.

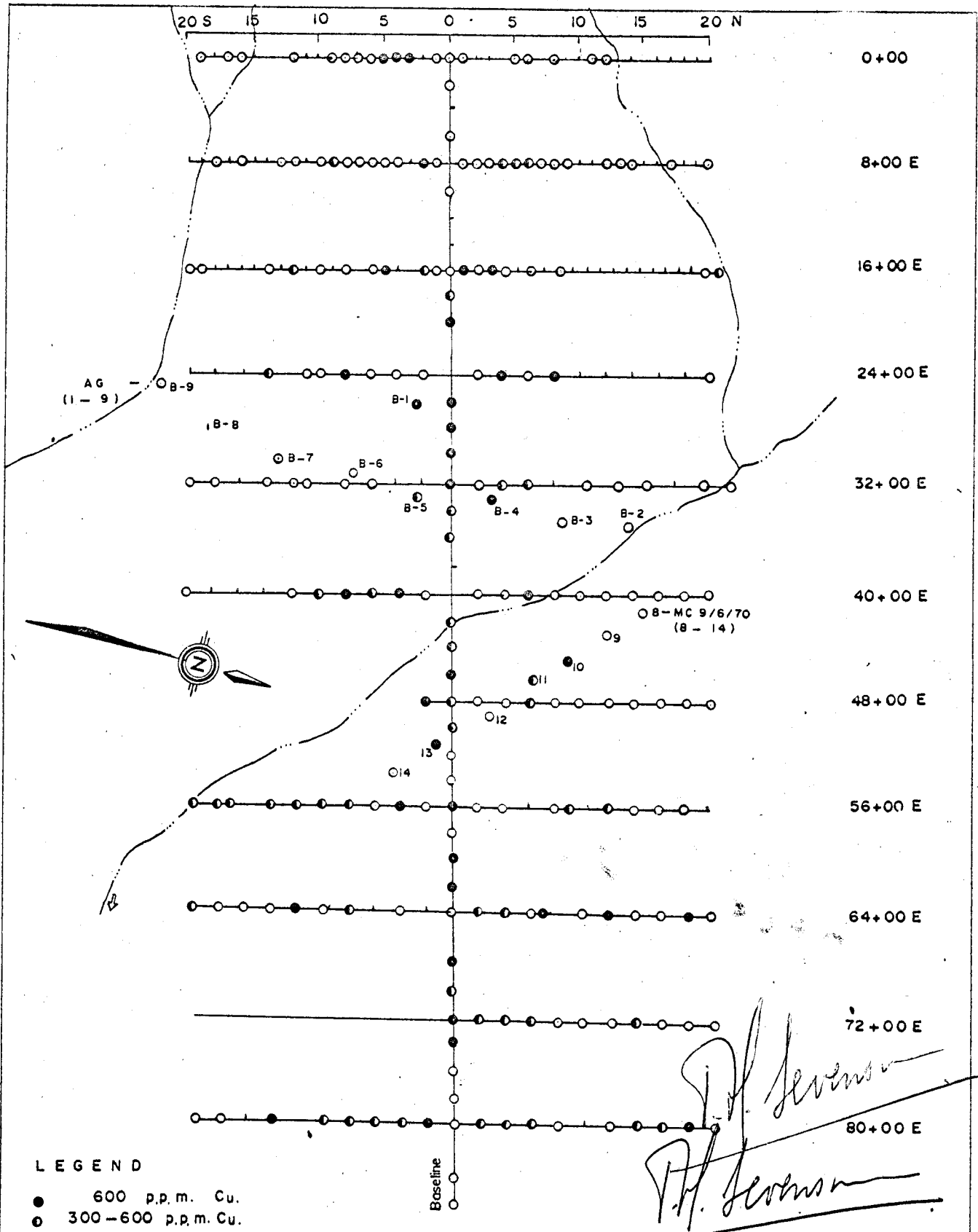


P.H. Sevensma



LEGEND	
	Intrusive— mainly monzonite
	Volcanics — massive or porphyritic andesite
	" tuffaceous rocks
	Glacial and/or stream sediments.
	Cu. mineralization
	Rock slide
	Fault
	Major fractures : inclined, vertical
	Claim post.

SKYLINE — GO, PYRRHOTITE CR. AREAS
 Atlin M.D.—Y.T. GEOLOGY MAP 104—J—4
 Peter H. Sevensma Consultants Ltd., Vancouver, B.C.
 August 1970 Scale: 0 1000' Fig: 2



LEGEND

- 600 p.p.m. Cu.
- 300-600 p.p.m. Cu.
- 100-300 p.p.m. Cu.
- 1-100 p.p.m. Cu.

SKYLINE — GO, PYRRHOTITE CR. AREA Geochemical Soil Sampling Atlin M.D. — B.C. 104 — J — 4	
Peter H. Sevensma Consultants Ltd., Vancouver, B.C.	
Aug. 1970	Scale: 0 1000 Fig: 3



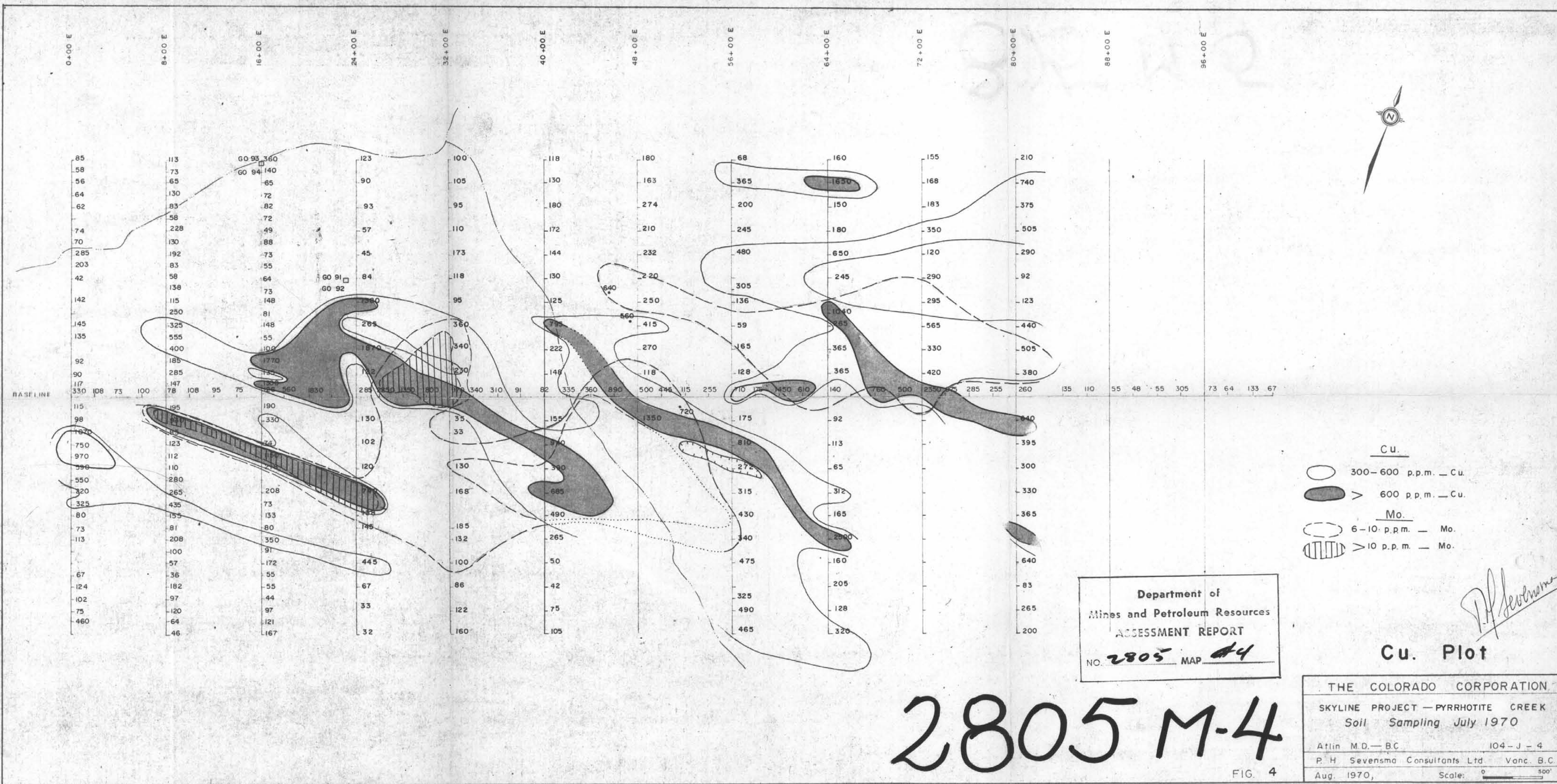
LEGEND

Topography: N.T.S. 1:50,000.
 Geology: After G.S.C. map 21-1962.

- Tertiary basalts
- Granodioritic - monzonite intrusives
- Triassic Volcanics
- Main showing
- Area of probable showings.
- Lead-zinc soil anomaly.
- Pyrrhotite grid area.

2805 M-1

THE COLORADO CORPORATION
 GO GROUP CLAIM LOCATION MAP
 Atlin MD-BC. 104-J-4
 P. H. Sevensma Consultants Ltd. Vancouver, BC
 Mar 1970 Scale 0 1/2 1 m



- Cu.**
- 300-600 p.p.m. — Cu.
 - > 600 p.p.m. — Cu.
- Mo.**
- 6-10 p.p.m. — Mo.
 - > 10 p.p.m. — Mo.

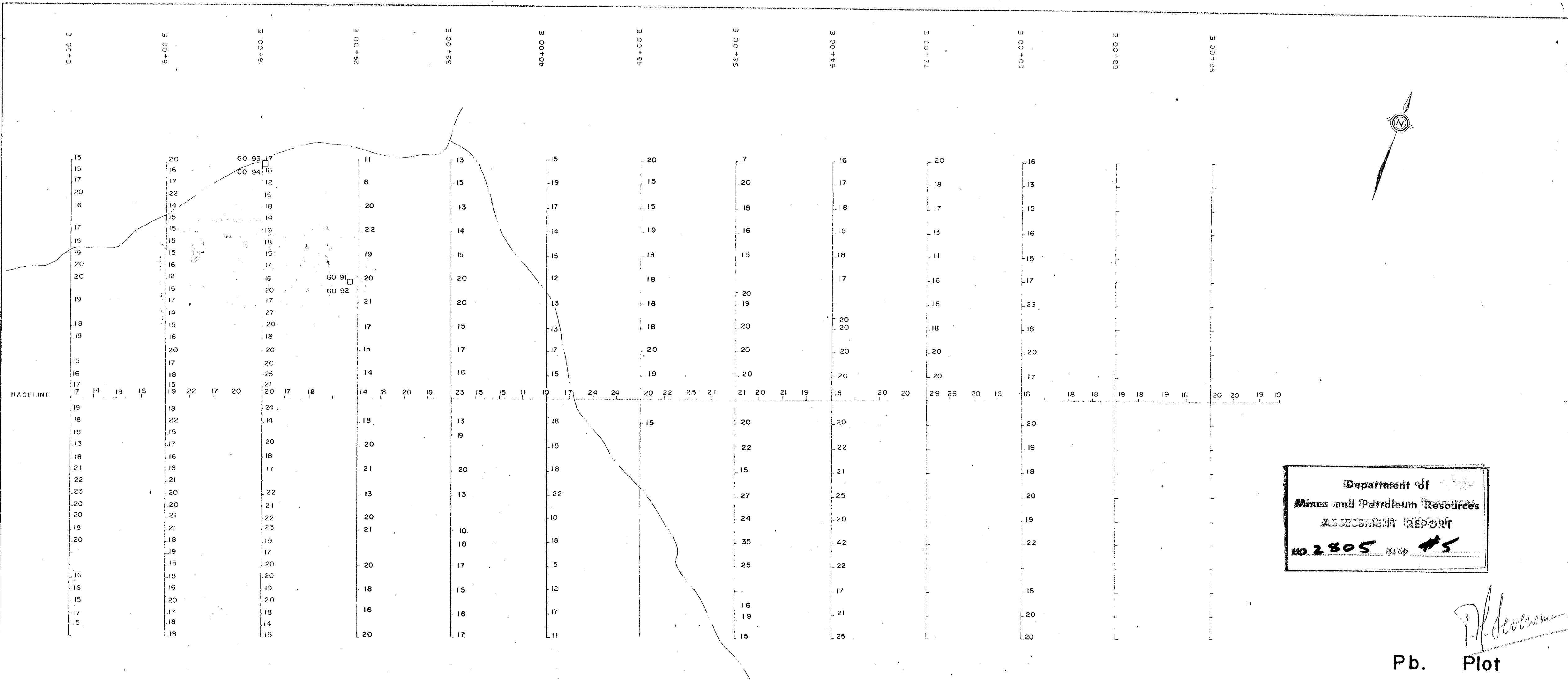
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **2805** MAP **M-4**

Cu. Plot

THE COLORADO CORPORATION
SKYLINE PROJECT — PYRRHOTITE CREEK
Soil Sampling July 1970
Atlin M.D.— B.C. 104-J-4
P. H. Sevensma Consultants Ltd. Vanc. B.C.
Aug. 1970, Scale: 0 500'

2805 M-4

FIG. 4



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO 2805 M-5

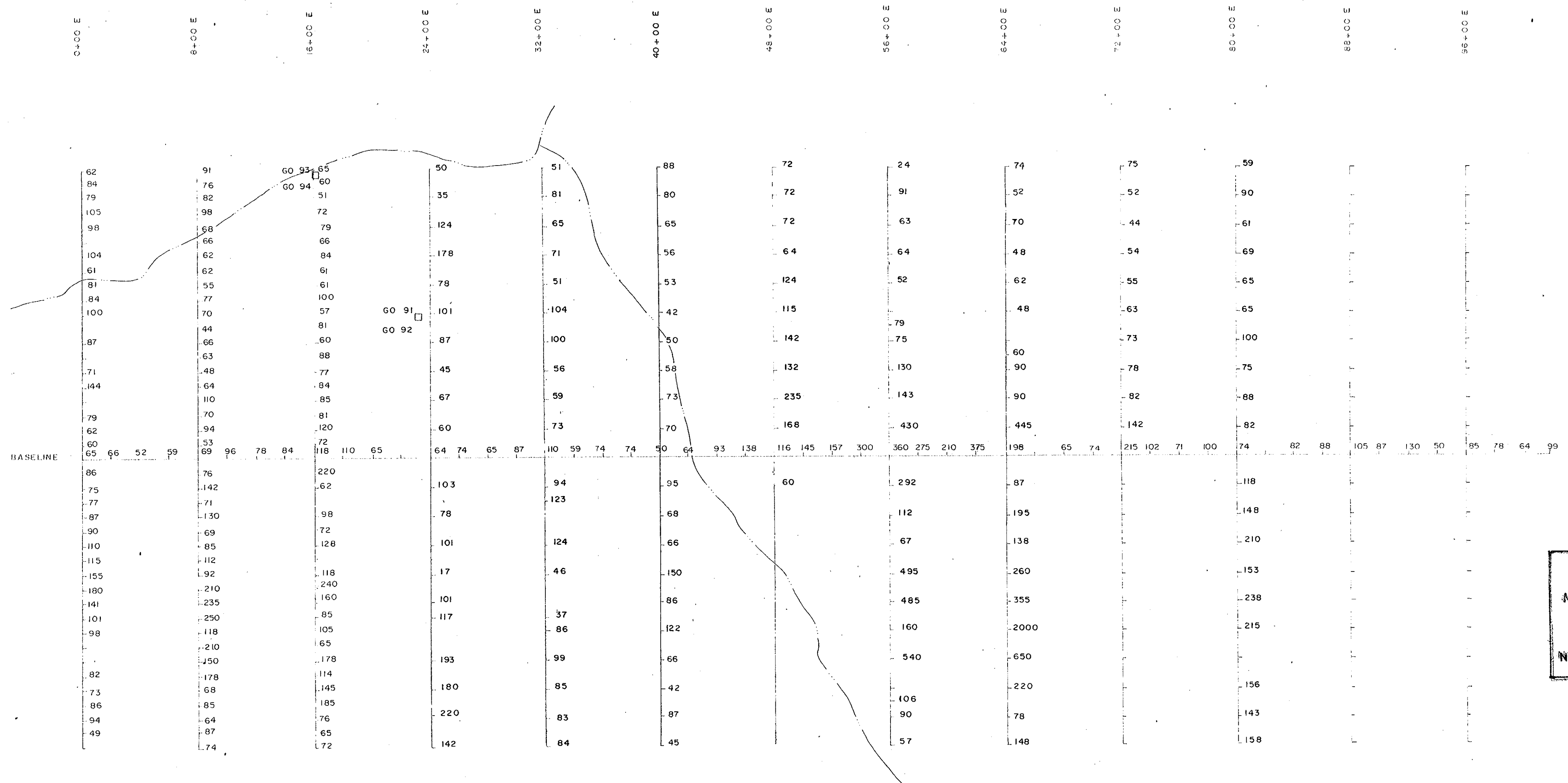
P. H. Sevensma

Pb. Plot

2805 M-5

FIG. 5

THE COLORADO CORPORATION
 SKYLINE PROJECT --PYRRHOTITE CREEK
 Soil Sampling July 1970
 Atlin M.D. -- B.C. 104-J-4
 P. H. Sevensma Consultants Ltd. Vanc. B.C.
 Aug. 1970, Scale: 1" = 500'



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 2805 MAP #6

[Handwritten Signature]

Zn. Plot

2805 M-6

THE COLORADO CORPORATION
 SKYLINE PROJECT - PYRRHOTITE CREEK
 Soil Sampling July 1970
 Attn: M.D. - BC 104-J-4
 P. H. Sevensma Consultants Ltd. Vanc. B.C.
 Aug. 1970, Scale: 0 500'

FIG. 6